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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,956	08/31/2001	Harry Tang	00982	2042
26285	7590	11/29/2005	EXAMINER	
KIRKPATRICK & LOCKHART NICHOLSON GRAHAM LLP			LEE, ANDREW CHUNG CHEUNG	
535 SMITHFIELD STREET			ART UNIT	PAPER NUMBER
PITTSBURGH, PA 15222			2664	

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/943,956

Applicant(s)

TANG ET AL.

Examiner

Andrew C. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-10, 31 and 32 is/are allowed.
- 6) ☒ Claim(s) 11-30 is/are rejected.
- 7) ☒ Claim(s) 12, 13, 18, 19, 27 and 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 11, 14 – 17, 20, 21, 23, 25, 26, are rejected under 35 U.S.C. 103(a) as being unpatentable over Yim et al. (US 6580727 B1) in view of the Article "Efficient Implementation of Semaphores in Controller Area Networks" by Cena et al., Industrial Electronics, IEEE Transactions on, Volume 46, Issue 2, April 1999, PP417- 428.

Regarding claim 11, Yim et al. disclose the limitation of a method of providing ADSL provision flow control at a DSLAM switch (Fig.1, column 1, 40 – 48, 55 – 63), comprising: sending a provision request from a network management system to a DSLAM switch (column 9, lines 33 – 37; column 10, lines 10 – 16; lines 48 – 50; column 12, lines 64 – 67); determining whether a DSLAM level semaphore is available at the DSLAM switch (column 11, lines 7 – 12; lines 26 – 36); determining whether an element management system level semaphore is available (column 11, lines 48 – 54); and connecting the network management system to the DSLAM switch (column 12, lines 7 – 18). (It is noticed that the Article by Cena et al. disclose the limitation of semaphore (page 418, Third paragraph, lines 19 – 29)).

Regarding claims 14, 30, Yim et al. disclose the limitation of the method according to claimed further comprising determining whether a connection is being configured on a corresponding DSLAM switch when the DSLAM level semaphore is available at the DSLAM switch (column 11, lines 26 – 36; column 12, lines 55 – 63).

Regarding claim 15, Yim et al. disclose the limitation of a method of providing ADSL provision flow control at a DSLAM switch, comprising: sending a provision request from a network management system to a DSLAM switch (column 9, lines 33 – 37; column 10, lines 10 – 16; lines 48 - 50); Yim et al. does not disclose expressly the method according to claimed further comprising locking the level semaphore to the switch when a connection is being configured on the DSLAM. The Article by Cena et al. discloses the limitation of the method according to claimed further comprising locking the level semaphore to the switch when a connection is being configured on the DSLAM (page 420, first column, first paragraph, lines 1- 16). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yim et al. to include the method according to claimed further comprising locking the DSLAM level semaphore to the DSLAM switch when a connection is being configured on the DSLAM such as that taught by the Article (by Cena et al.) in order to provide the application designer with a powerful support with which to synchronize the concurrent activities and offers a high degree of reliability and efficiency at the same time.

Regarding claim 16, Yim et al. disclose the limitation of the method according to claimed further comprising blocking other connection requests on the DSLAM switch when a connection request is being configured on the DSLAM switch (column 9, lines 33 – 42).

Regarding to claim 17, Yim et al. disclose the limitation of a method of providing ADSL provision flow control at a DSLAM switch, comprising: sending a provision request from a network management system to a DSLAM switch (column 9, lines 33 – 37; column 10, lines 10 – 16; lines 48 - 50); Yim et al. do not disclose expressly the method according to claimed further comprising releasing the level semaphore when the element management system semaphore is not available. The Article by Cena et al. discloses the limitation of the method according to claimed further comprising releasing the level semaphore when the element management system semaphore is not available (page 421, Fig. 3, second column, lines 10 – 27). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Yim et al. to include the method according to claimed further comprising releasing the level semaphore when the element management system semaphore is not available such as that taught by the Article (by Cena et al.) in order to provide the application designer with a powerful support with which to synchronize the concurrent activities and offers a high degree of reliability and efficiency at the same time.

Regarding claim 20, Yim et al. disclose the limitation of a method of providing ADSL provision flow control at a DSLAM switch (Fig.1, column 1, 40 – 48, 55 – 63), comprising: determining whether a provision request for a DSLAM switch was issued by a GUI operator (column 10, lines 35 – 37, lines 48 – 50); and resetting an attribute associated with the provision request made by the GUI operator (column 12, lines 40 – 46).

Regarding claim 21, Yim et al. disclose the limitation of a method according to claimed wherein resetting an attribute comprises resetting an object associated with the

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provision request made by the GUI operator (column 10, lines 35 – 37, lines 48 – 50; column 12, lines 40 – 46).

Regarding claim 28, Yim et al. disclose the limitations of a computer program product comprising a computer readable medium having control logic stored therein for causing a computer to provide ADSL provision flow control at the DSLAM switch (Fig. 3, column 4, lines 62 – 67; column 6, lines 23 – 67; column 7, lines 1 – 15), the control logic comprising computer-readable program code for causing the computer to: send a provision request to the DSLAM switch to establish a virtual circuit (column 9, lines 33 – 37; column 10, lines 10 – 16; lines 48 – 50; column 12, lines 64 – 67); determine whether a DSLAM level semaphore is available at the DSLAM switch (column 11, lines 7 – 12; lines 26 – 36); determine whether an element management system level semaphore is available (column 11, lines 48 – 54); and connect a connect a network management system to the DSLAM switch in response the DSLAM level semaphore and the element management system level semaphore being available (column 12, lines 7 – 18 ).

3. Claims 23, 25, 26, 22, 24, are rejected under 35 U.S.C. 103(a) as being unpatentable over Yim et al. (US 6580727 B1) and the Article “Efficient Implementation of Semaphores in Controller Area Networks” by Cena et al., Industrial Electronics, IEEE Transactions on, Volume 46, Issue 2, April 1999, PP417-428 as applied to claims 11, 14 – 17, 20, 21, 23, 25, 26, above, and further in view of Tang et al. (US 6885672 B1).

Regarding claims 23, 25, 26, both Yim et al. and the Article by Cena et al. do not disclose expressly the system according to claimed further comprising determining whether there is a batch process provision that a batch process is requesting activity on the DSLAM switch. Tang et al. disclose the limitation of the system according to claimed further comprising a second object defined by the network management system for representing that a batch process is requesting activity on the DSLAM switch (column 1, lines 42 – 45). It would have been obvious to one of ordinary skill in the art at the time the invention was made modify both Yim et al. and the Article by Cena et al. to include a system according to claimed further comprising a second object defined by the network management system for representing that a batch process is requesting activity on the DSLAM switch such as that taught by Tang et al. in order to provide a system and method for provisioning virtual circuit orders on a telecommunications network.

Regarding claims 22, 24, both Yim et al. and the Article by Cena et al. do not disclose expressly the method according to claimed wherein determining whether a provision request was issued by a GUI operator comprises determining whether a GUI request flag is set. Tang et al. disclose the limitation of the method according to claimed wherein determining whether a provision request was issued by a GUI operator comprises determining whether a GUI request flag is set (column 4, lines 49 – 51). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify both Yim et al. and the Article by Cena et al. to include a method according to claimed wherein determining whether a provision request was issued by a GUI operator comprises determining whether a GUI request flag is set such as that taught by Tang et al. in order to

provide a system and method for provisioning virtual circuit orders on a telecommunications network.

***Allowable Subject Matter***

4. Claims 1 –5, 6 – 10, 31 – 32 are allowed over prior arts.

Prior art of record does not disclose, in single or in combination, the claimed a control algorithm for controlling ADSL provision flow on a DSLAM switch by introducing a two level semaphore including a first semaphore and a second semaphore; where the first semaphore controls a first provision request flow at the element management system level and the second semaphore controls a second provision request flow at the DSLAM switch level as disclosed in claims 1, 6 and 31.

5. Claims 12, 13, 18, 19, 27, 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Prior art of record does not disclose, in single or in combination, the claimed delaying when the DSLAM level semaphore is not available; delay for 10 – 15 seconds.

***Response to Arguments***

6. Applicant's arguments with respect to claims 1 – 32 have been considered but are moot in view of the new ground(s) of rejection.



***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C. Lee whose telephone number is (571) 272-3131. The examiner can normally be reached on Monday through Friday from 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on (571) 272-3134. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ACL

Nov 17, 2005

  
**Ajit Patel**  
**Primary Examiner**